

Sandia National Laboratories' International Biological Threat Reduction Iraq Program

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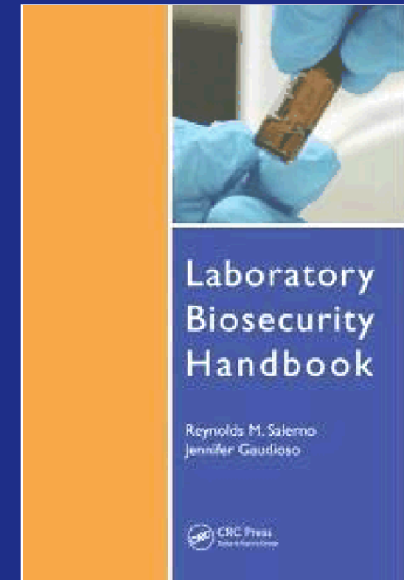
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International Biological Threat Reduction
Global Security Programs
Sandia National Laboratories
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www.biosecurity.sandia.gov



Sandia IBTR Mission and Goals

- **Mission:** To enhance United States and international security by reducing biological threats worldwide
- **IBTR's highest goals**
 - Enhance safety, security, and containment of dangerous biological agents in bioscience facilities
 - Strengthen capacities to detect and control dangerous biological agents
 - Improve understanding and mitigation of biological threats





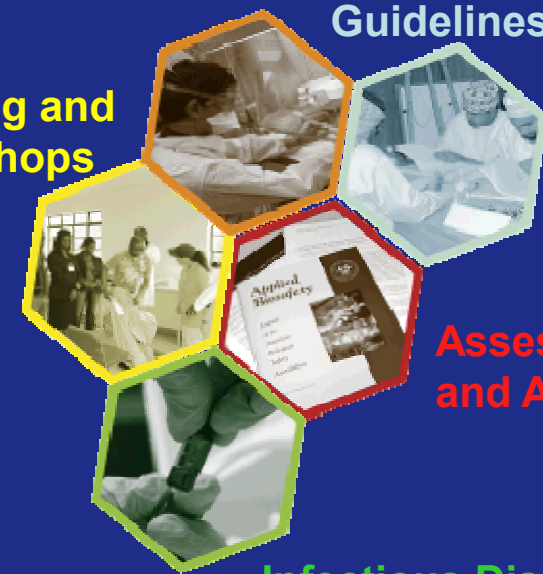
IBTR Program and Unique Technical Capabilities

- Laboratory biorisk assessments
- Biosecurity implementation
- Biorisk management training
- Biorisk systems implementation
- Integrated systems approach to biothreat identification, prevention, and response
- Building public and animal health capabilities in support of risk reduction
- Structured decision analysis tools
 - Global/regional
 - National
 - Agent-specific

**Laboratory Biosafety,
Biosecurity, and
Biocontainment**

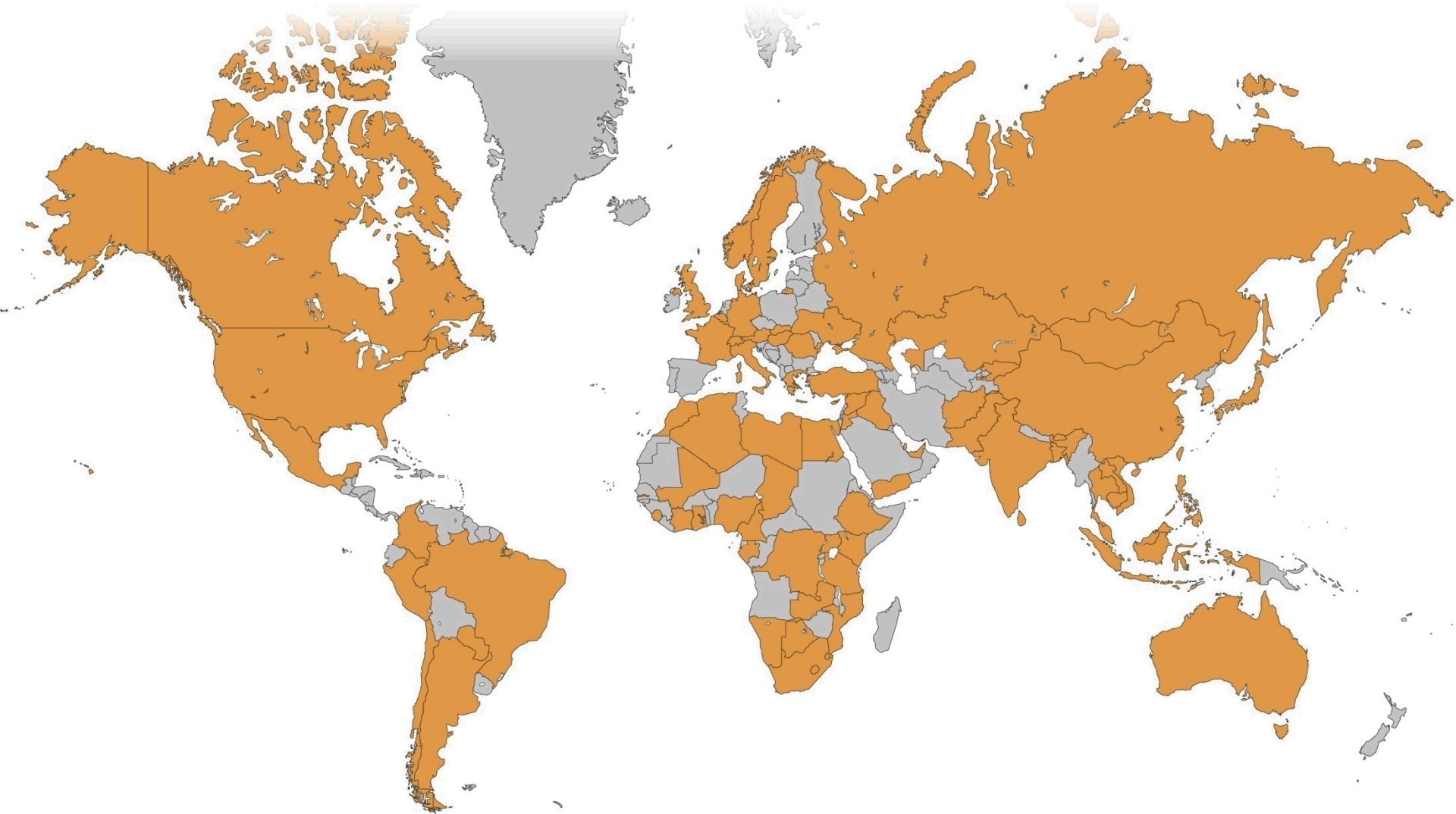
**Policy, Regulatory, &
Guidelines Support**

**Training and
Workshops**



**Assessments
and Analysis**

**Infectious Disease
Diagnostics and
Control**





US Department of State

- **U.S. Department of State (DoS)**
- **Develops cooperative international programs that promote the safe, secure and responsible use of biological materials that are at risk of accidental release or intentional misuse.**
- **Focuses on scientific engagement of biomedical professionals, infectious disease experts, and research facilities that study infectious microorganisms**





IBTR Activities in Iraq

- **Laboratory assessments**
- **General laboratory biorisk management training**
- **Design and implementation of physical security systems at priority laboratories in Baghdad**
- **Training on the use of molecular biotechnology**
- **Collaboration with the Al-Kindi Company for the Production of Animal Vaccines**
- **Technical collaboration to support the development of an Iraqi National Biosafety Committee**





Biosafety and Biosecurity Assessments

- **Al-Kindi Company for the Production of Veterinary Vaccines**
- **The Central Veterinary Company**
- **The Central Public Health Laboratory**
- **The Transboundary Animal Disease Laboratory**
- **The University of Baghdad**
 - College of Science
 - College of Veterinary Medicine
- **Survey laboratories throughout Bagdad**





Laboratory Biosafety and Biosecurity Training

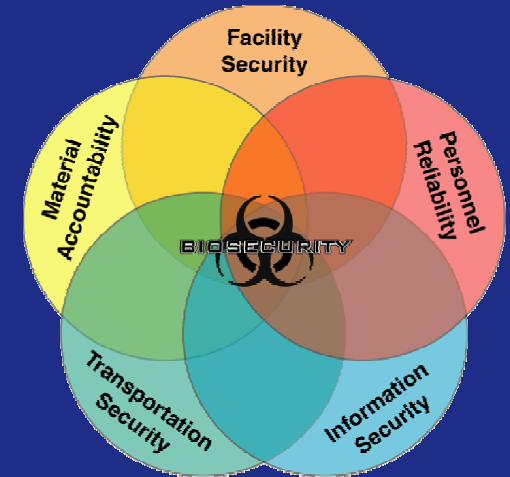
- **General Biosafety and Biosecurity Awareness**
 - Participants from the Ministry of Agriculture, Ministry of Health, Ministry of Higher Education, and Ministry of Science and Technology
- **Introductory Laboratory Biosafety and Biosecurity**
- **Biorisk management training**
 - Infectious pathogen shipping
 - Standard Operating Procedures Development Workshop
- **One year distance learning course to develop biosafety professionals in key laboratories (2012)**





Provision of Biosecurity Systems to Diagnostic Labs

- **Plans to implement comprehensive biosecurity systems**
 - Central Public Health Laboratory
 - Central Veterinary Laboratory
 - Transboundary Animal Disease Laboratory
- **Raise awareness on laboratory biosecurity**
- **Begin to implement the components of biosecurity into laboratories in 2011 - 2012**
 - Physical security
 - Material accountability
 - Information security
 - Transportation security
 - Personnel reliability





Biotechnology

- The use of modern molecular tools helps minimize pathogen handling and largely supports biosecurity efforts
- **Provided training to Iraqi biomedical professionals at the Jordan University of Science and Technology (JUST)**
 - Central Public Health Laboratory
 - College of Veterinary Medicine
- **Plan to provide an additional advanced training in 2012**





Scientific Engagement with the Al-Kindi Co.

- **Technical engagement with the Al-Kindi Company**
 - Establish relationship with International or US collaborators
- **Supporting best laboratory practices**
 - Laboratory biosafety and biosecurity
 - Quality control
- **Laboratory capacity building**
 - Enhanced filling capabilities to support import of proven antigen
- **Staff training to support technical advancements**





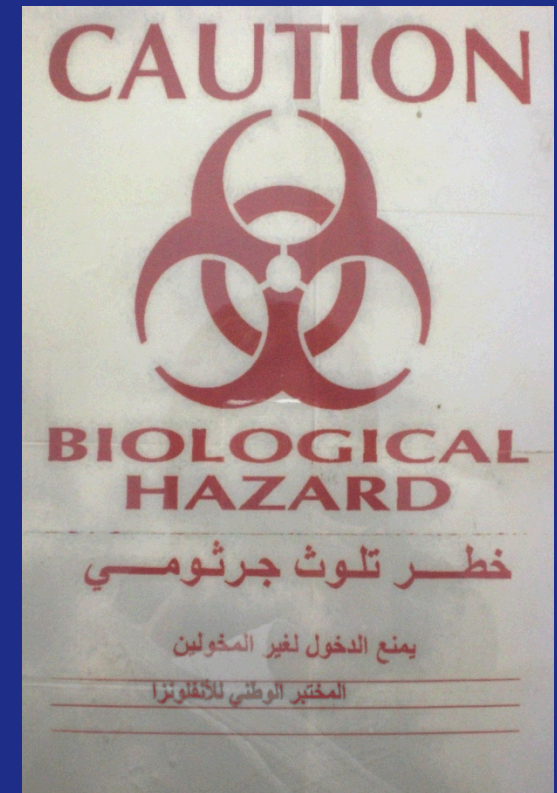
Building a National Committee for Biosafety

- **Working with the Prime Ministers Advisory Council, the Ministry of Health, and the Ministry of Science and Technology (National Monitoring Directorate)**
- **IBTR staff will meet with high level representatives from the Ministries of Agriculture, Environment, Health, Higher Education, and Science and Technology to establish:**
 - Bioscience community support
 - Mission
 - Objectives
 - Membership
 - Origin: governmental versus nongovernmental



Summary

- **IBTR/DOS are collaborating with many Iraqi Ministries to build a culture of safe and secure laboratory practices**
- **To date we have engaged/trained many biomedical professionals and facilities and plan to continue to provide diverse training activities that supports biosafety and biosecurity in Iraq**
- **Future activities are aimed at building biosafety and biosecurity capacity at key laboratories in Iraq**
 - Train the trainers
 - Expand outside of Baghdad to regional public health and agricultural laboratories and universities





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